

WHAT IS CLAIMED IS:

1. In an online system, a method for determining the capabilities of client devices and supplying media content in a format suitable for such devices, the method comprising:
 - receiving a request to provide a target device with a copy of a particular media object;
 - determining capabilities of the target device;
 - based on the capabilities of the target device, determining a format that is desired for providing the target device with a copy of the media object;
 - translating the particular media object into a copy having said determined format; and
 - providing the target device with the copy having said determined format.
2. The method of claim 1, further comprising
 - storing the copy having said determined format in a cache memory.
3. The method of claim 2, further comprising:
 - receiving from a target device a subsequent request for the particular object in the determined format; and
 - providing the target device with the copy stored in said cache memory.
4. The method of claim 1, further comprising:
 - obtaining a copy of said particular media object from a connected server for translation of said media object.
5. The method of claim 4, further comprising:
 - storing in cache memory a cached copy of said media object received from said connected server; and
 - in response to subsequent requests for translation of said media object, using the copy of said media object stored in cache memory.
6. The method of claim 1, wherein the capabilities of the target device include screen resolution.

7. The method of claim 1, wherein the capabilities of the target device include screen size.

8. The method of claim 1, wherein the capabilities of the target device include color support.

9. The method of claim 1, wherein the capabilities of the target device include bit rate.

10. The method of claim 1, wherein the capabilities of the target device include currently-available communication medium that the target device employs to transmit its request.

11. The method of claim 10, wherein currently-available communication medium comprises wireless communication.

12. The method of claim 10, wherein currently-available communication medium comprises wireline communication.

13. The method of claim 1, wherein said step of determining capabilities of the target device includes examining the request submitted by the device

14. The method of claim 1, wherein said step of determining capabilities of the target device includes examining the HTTP header submitted by the device.

15. The method of claim 14, wherein examining the HTTP header submitted by the device includes examining the HTTP User-Agent header.

16. The method of claim 1, wherein said step of determining capabilities of the target device includes querying the device for its capabilities.

17. The method of claim 1, wherein said step of determining capabilities of the target device includes determining capabilities from a knowledgebase, based on a device class for the target device.

18. The method of claim 17, further comprising:
recording a log record of target devices that are not recognized to enable the capabilities of said devices to be added to the knowledgebase.

19. The method of claim 18, further comprising:
automatically issuing notifications regarding said target devices that are not recognized.

20. The method of claim 1, wherein said step of determining a format that is desired includes determining an appropriate resolution for rendering the particular image at the target device.

21. The method of claim 1, wherein said step of determining a format that is desired includes determining an appropriate color space for rendering a particular image at the target device.

22. The method of claim 1, wherein said step of determining a format that is desired includes determining an appropriate image size for rendering the particular image at the target device.

23. The method of claim 1, wherein said step of determining a format that is desired includes determining whether to rotate the particular image to conform to the aspect ratio of the target device display.

24. The method of claim 1, wherein said step of determining a format that is desired includes determining the appropriate bit rate for the target device.

25. The method of claim 1, wherein said step of determining a format that is desired includes determining communication bandwidth available for transmitting a copy of the particular media object to the target device.

26. The method of claim 25, wherein the communication bandwidth available is determined, at least in part, based on the HTTP request header received from the target device.

27. The method of claim 25, wherein the communication bandwidth available is determined, at least in part, based on a device class for the target device.

28. The method of claim 1, wherein said target device includes a handheld computing device having display capability.

29. The method of claim 1, wherein said target device includes a handheld computing device having digital audio capability.

30. The method of claim 1, wherein said target device includes a cellular phone device having display capability.

31. The method of claim 1, wherein said target device includes a cellular phone device having digital audio capability.

32. The method of claim 1, wherein said target device includes a pager device having display capability.

33. The method of claim 1, wherein said target device includes a personal computer having display capability.

34. The method of claim 1, wherein said target device includes a personal computer having digital audio capability.

35. The method of claim 1, wherein said target device includes WAP (Wireless Application Protocol) support.

36. The method of claim 1, wherein said media objects include digital images.

37. The method of claim 1, wherein said digital objects include digital video.

38. The method of claim 1, wherein said digital objects include digital audio.

39. An online system for providing digital media to target devices, the system comprising:

a capabilities module for determining the capabilities of a particular target device;

a transformation module for:

automatically retrieving a copy of a particular media object; and

providing the target device with a copy of said object, said copy being automatically translated into a particular format based on the capabilities of the target device.

40. The system of claim 39, further comprising:

a cache memory for storing copies of media objects that have been translated.

41. The system of claim 40, wherein said system first attempts to satisfy the request by retrieving a copy of the particular object in the particular format from the cache memory.

42. The system of claim 39, further comprising:

a cache memory for storing copies of media objects that have been retrieved.

43. The system of claim 42, wherein said system first attempts to retrieve a copy of the particular media object from the cache memory before retrieving a copy from a remote server.

44. The system of claim 39, wherein each digital object stored by said system is identified by a unique uniform resource locator (URL).

45. The system of claim 44, wherein said unique URL is encoded with the characteristics of said digital object.

46. The system of claim 44, wherein said unique URL includes the color depth of said digital object.

47. The system of claim 44, wherein said unique URL includes the image size of said digital object.

48. The system of claim 44, wherein said unique URL includes the resolution of said digital object.

49. The system of claim 44, wherein said unique URL includes the bit rate of said digital object.

50. The system of claim 44, wherein said system stores URLs for each of the digital objects, and wherein the capabilities module is capable of determining the particular digital object that may be provided to the target device from said URLs.

51. The system of claim 39, wherein the capabilities of the target device include screen resolution.

52. The system of claim 39, wherein the capabilities of the target device include screen size.

53. The system of claim 39, wherein the capabilities of the target device include color support.

54. The system of claim 39, wherein the capabilities of the target device include bit rate.

55. The system of claim 39, wherein the capabilities of the target device include currently-available communication medium that the target device employs to transmit its request.

56. The system of claim 55, wherein currently-available communication medium comprises wireless communication.

57. The system of claim 55, wherein currently-available communication medium comprises wireline communication.

58. The system of claim 39, wherein said capabilities module includes the ability to determine the capabilities of the target device from its HTTP header.

59. The system of claim 58, wherein said capabilities module includes the ability to determine the capabilities of the target device from its HTTP User-Agent header.

60. The system of claim 39, wherein said capabilities module includes the ability to query the target device for its capabilities.

61. The system of claim 39, wherein said capabilities module includes a knowledgebase for determining the capabilities of the target device based on its device class.

62. The system of claim 61, further comprising:
a log record for recording target devices that are not recognized to enable the capabilities of said devices to be added to the knowledgebase.

63. The system of claim 39, wherein said particular format is selected based on an appropriate resolution for rendering the particular media object at the target device.

64. The system of claim 39, wherein said particular format is selected based on an appropriate color space for rendering the particular media object at the target device.

65. The system of claim 39, wherein said particular format is selected based on an appropriate image size for rendering the particular media object at the target device.

66. The system of claim 39, wherein said particular format is selected based on an appropriate bit rate for rendering the particular media object at the target device.

67. The system of claim 39, wherein said particular format is selected based on communication bandwidth available for transmitting a copy of the particular media object to the target device.

68. The system of claim 67, wherein the communication bandwidth available is determined, at least in part, based on a device class for the target device.

69. The system of claim 39, wherein said target device includes a handheld computing device having display capability.

70. The system of claim 39, wherein said target device includes a handheld device having digital audio capability.

71. The system of claim 39, wherein said target device includes a cellular phone device having display capability.

72. The system of claim 39, wherein said target device includes a cellular phone device having digital audio capability.

73. The system of claim 39, wherein said target device includes a pager device having display capability.

74. The system of claim 39, wherein said target device includes a personal computer having display capability.

75. The system of claim 39, wherein said target device includes a personal computer device having digital audio capability.

76. The system of claim 39, wherein said target device includes WAP (Wireless Application Protocol) support.

77. In an online system, a method for determining the capabilities of client devices, the method comprising:

receiving an original request from a target device in which said target device does not include information regarding its capabilities;

determining capabilities of the target device;

supplementing said original request received from said target device with information about the capabilities of said target device; and

forwarding said supplemented request to a destination specified in said original request.

78. The method of claim 77, wherein said step of determining capabilities of the target device includes examining the request submitted by the device

79. The method of claim 77, wherein said step of determining capabilities of the target device includes examining the HTTP header submitted by the device.

80. The method of claim 79, wherein examining the HTTP header submitted by the device includes examining the HTTP User-Agent header.

81. The method of claim 77, wherein said step of determining capabilities of the target device includes querying the device for its capabilities.

82. The method of claim 77, wherein said step of determining capabilities of the target device includes determining capabilities from a knowledgebase, based on a device class for the target device.